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WHAT IS CLAIMED IS:

1	1 .	An audio system for use with a personal computer, the audio system
2	comprising:	
3	a first	voltage supply;
4	a seco	nd voltage supply;
5	an auc	lio amplifier;
6	means	for connecting a first speaker to the audio amplifier;
7	a jack	for coupling a second speaker to the audio amplifier;
8	a jack	-sense line coupled to the jack, the jack-sense line assuming a first
9		condition when a speaker is connected to the jack and assuming a $351/7$
10		second condition when a speaker is not connected to the jack; and
11	a swit	ch coupled to the first voltage supply, to the second voltage supply, and
12		to the audio amplifier, wherein the switch operates in response to the
13		first condition of the jack-sense line to couple the first voltage supply
14		to the audio amplifier and operates in response to the second condition
15		of the jack-sense line to couple the second voltage supply to the audio
16		amplifier.

- 2. An audio system as defined in Claim 1, wherein the switch is coupled to an output of the audio amplifier and operates to enable single-ended operation of the audio amplifier in response to the first condition and to enable bridged mode operation in response to the second condition.
- 1 3. An audio system as defined in Claim 2, wherein the switch is coupled 2 between an output of the audio amplifier and the first speaker.
 - 4. An audio system as defined in Claim 2, wherein the switch has a first pole coupled to a voltage supply node of the audio amplifier, a first contact coupled to the first voltage supply, and a second contact coupled to the second voltage supply.
- 1 5. An audio system as defined in Claim 4, wherein the switch has a second pole coupled to an output of the audio amplifier and a third contact coupled to the first speaker.

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1	6. An audio system as defined in Claim 1, wherein the audio amplifier
2	includes a noninverting stage and an inverting stage and wherein the first speaker is
3	coupled across an output of the noninverting stage and an output of the noninverting
4	stage.
1	7. An audio system as defined in Claim 6, wherein the switch is coupled
2	to an output of the audio amplifier and to the first speaker and operates to enable
3	single-ended operation of the audio amplifier in response to the first condition and to

8. An audio system as defined in Claim 7, wherein the switch is coupled between an output of the audio amplifier and the first speaker.

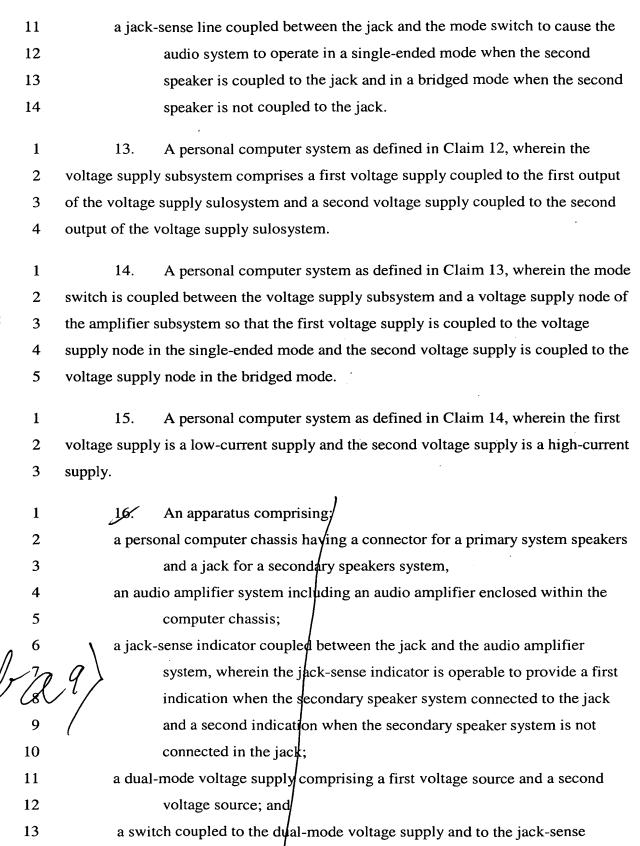
enable bridged mode operation in response to the second condition.

- 9. An audio system as defined in Claim 8, wherein the switch has a first pole coupled to a voltage supply terminal of the audio amplifier a first contact coupled to the first voltage supply, and a second contact coupled to the second voltage supply.
- 10. An audio system as defined in Claim 9, wherein the first voltage supply is a low-current, regulated supply.
- 11. An audio system as defined in Claim 9, wherein the second voltage supply is a high-current supply.
- 1 A personal computer system comprising an audio system, the audio 2 system comprising:
 - a voltage supply subsystem having a first output and a second output;
 - an amplifier subsystem having a first stage with a noninverting output and a second stage with an inverting output;
 - a first speaker coupled between the inverting output and the noninverting output;
 - a jack coupled to an ampliffer output for a second speaker;
 - a mode switch coupled to the voltage supply subsystem and to the power amplifier subsystem;

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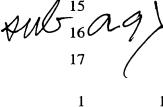
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indicator for coupling the first voltage source to the audio amplifier



when the secondary speaker system is connected to the jack and for coupling the second voltage source to the audio amplifier when the secondary speaker system is not connected to the jack.

- 17. An apparatus as defined in Claim 16, wherein the audio amplifier includes an inverting stage having an inverting output and a noninverting stage having a noninverting output and wherein the connector is coupled between the inverting output and the noninverting output and the jack is connected between (i) either the inverting output or the noninverting output and (ii) GND.
- 18. An apparatus as defined in Claim 17, Wherein the audio amplifier includes a voltage supply node and wherein the switch is coupled to the first voltage source, to the second voltage source and to the voltage supply terminal and wherein the switch operates to selectively couple either the first voltage source or the second voltage source to the voltage supply terminal in response to a signal provided by the jack-sense indicator.
- 19. An apparatus as defined in Claim 18, wherein the first voltage source is a low-current voltage source and the second voltage source is a high-current voltage source.
- 20. An apparatus as defined in Claim 19, wherein first voltage source is a regulated voltage source and the second voltage source is an unregulated voltage source.
- 21. An apparatus as defined in Claim 20, wherein the first voltage source is derived from the second voltage source.
- 22. In a personal computer, a method of supplying power to an audio amplifier, the method comprising:

 providing a voltage supply system that includes a first voltage source and a second voltage source;

 detecting whether an ancillary audio apparatus is connected to the personal

computer; and

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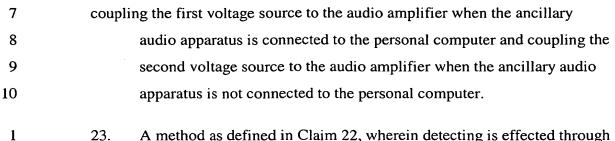
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- 23. A method as defined in Claim 22, wherein detecting is effected through the operation of a jack-sense indicator.
- 24. A method as defined in Claim 23, wherein coupling is effected through the operation of a switch that is coupled to the jack-sense indicator, to the voltage supply system and to a voltage supply node of the audio amplifier.
- 25. A method as defined in Claim 24, further comprising causing the first voltage supply terminal when the audio amplifier operates in a single-ended mode and causing the second voltage source to be coupled to the voltage supply terminal when the audio amplifier operates in a bridged mode.
- 26. A method as defined in Claim 25, wherein the first voltage source is a low-current source and the second voltage source is a high-current source.
- 27. A method as defined in Claim 26, wherein the first voltage source is a regulated voltage source.
- 28. A computer system comprising a dual-mode audio amplifier arrangement that selectively operates in either a single-ended mode or in a bridged mode, the audio amplifier arrangement comprising:
- an audio amplifier having a first output terminal, a second output terminal and a
 voltage supply node, wherein in the single-ended mode an audio output
 signal appears between the first output terminal and GND and wherein in
 the bridged mode an audio output signal appears between the first output
 terminal and the second output terminal;
- 9 a first voltage supply;
- 10 a second voltage supply; and



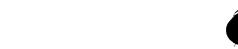
11	mode-	selecting means for selectively coupling the first voltage supply to the
12		voltage supply node in the single-ended mode and coupling the second
13		voltage supply to the voltage supply terminal in the bridged mode.
1	ź 9.	A computer system as defined in Claim 28, wherein the mode-selecting
2	means compr	ises:

a jack-sense indicator coupled to the first terminal; and
a switch coupled to the jack-sense indicator, to the first and second voltage
supplies, and to the voltage supply node, the switch operable in response to
signals provided by the jack sense indicator to couple the first voltage
supply to the voltage supply node in the single-ended mode and to couple
the second voltage supply to the voltage supply node in the bridged mode.

30. A computer system as defined in Claim 28, wherein the audio amplifier comprises:

a noninverting stage having a noninverting output; and an inverting stage having an inverting output.

- 31. A computer system as defined in Claim 30, wherein the mode-selecting means comprises:
 - a jack-sense indicator coupled to the first terminal; and
 a switch coupled to the jack-sense indicator, to the first and second voltage
 supplies, and to the voltage supply node, the switch operable in response to
 signals provided by the jack-sense indicator to couple the first voltage
 supply to the voltage supply node in the single-ended mode and to couple
 the second voltage supply to the voltage supply node in the bridged mode.
- 32. A computer system as defined in Claim 31, wherein the switch comprises a pole coupled to the inverting output and a first terminal coupled to the second output terminal and wherein the switch is operable to couple the noninverting output to the second output terminal in the bridged mode.
- In a personal computer system, an audio amplifier system comprising: a first amplifier stage having an input, an output, and a voltage supply connection;



3	a second amplifier stage having an input, an output and a voltage supply	
4	connection;	
5	a first speaker connection;	
6	a second speaker connection;	
7	a jack coupled to the first speaker connection;	
8	a jack-sense indicator;	
9	a voltage supply node;	
10	a first voltage supply coupled to the voltage supply node and adapted to be	
11	coupled to the AC line;	
12	a second voltage supply coupled to the voltage supply node;	
13	a first switch element coupled to the jack-sense indicator and having a pole	
14	coupled to the output of the second amplifier stage and having a contact	
15	coupled to the second speaker connection; and	
16	a second switch element having a pole connected to the voltage supply connection	
17	of the first amplifier stage, a first contact coupled to the voltage supply	
18	node, and a second contact coupled to the second voltage supply, whereby	
19	the jack-sense indicator is coupled to the first switch element and to the	
20	second switch element and is operable to determine the respective	
21	conditions of the switch elements in response to a determination whether	
22	external speakers are connected to the jack.	
1	34. An audio amplifier system in a personal computer is defined in Claim 33,	
2	wherein the jack-sense indicator detects the absence of external speakers connected in the	
3	jack and wherein:	
4	(i) the pole of first switch element is connected to the contact of the first switch	
5	element so that the output of the second amplifier stage is coupled to the	
6	second speaker connection; and	
7	(ii) the pole of the second switch element connected to the first contact of the	
8	second switch element so that the first voltage supply is coupled to the	
9	voltage supply connection of the first amplifier stage and the second	
10	voltage supply is disconnected from the voltage supply connection of the	

first amplifier stage.





- 35. An audio amplifier system in a personal computer as defined in Claim 33, wherein the jack-sense indicator detects the presence of external speakers connected in the jack and wherein:
 - (i) the pole of the first switch element is disconnected from the contact of the first switch element so that the output of the second amplifier stage is not coupled to the second speaker connection; and
 - (ii) the pole of the second switch element is connected to the second contact of the second switch element so that the first voltage supply is not coupled to the voltage supply connection of the first amplifier stage and the second voltage supply is connected to the voltage supply connection of the first amplifier stage.
- 36. An audio amplifier system in a personal computer system as defined in Claim 33, wherein the first voltage supply is arranged to provide high voltage and/or current to the first amplifier stage and to the second amplifier stage so as to promote bridged-mode operation of the audio amplifier system and the second voltage supply is arranged to provide noise-immune performance to the first amplifier stage so as to promote single-ended operation of the audio amplifier system.
- 37. An audio amplifier system in a personal computer is defined in Claim 36, wherein the jack-sense indicator provides a signal at its output that indicates the absence of external speakers connected in the jack and wherein:
 - (i) the pole of the first switch element is connected to the contact of the first switch element so that the output of the second amplifier stage is coupled to the second speaker connection; and
 - (ii) the pole of the second switch element connected to the first contact of the second switch element so that the first voltage supply is coupled to the voltage supply connection of the first amplifier stage and the second voltage supply is disconnected from the voltage supply connection of the first amplifier stage.

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1	38. An audio amplifier system in a personal computer as defined in Claim 36,		
2	wherein the jack sense indicator provides a signal at its output that indicates the presence		
3	of external speakers connected in the jack and wherein:		
4	(i) the pole of the first switch element is disconnected from the contact of the first		
5	switch element so that the output of the second amplifier stage is not		
6	coupled to the second speaker connection; and		
7	(ii) the pole of the second switch element is connected to the second contact of the		
8	second switch element so that the first voltage supply is not coupled to the		
9	voltage supply connection of the first amplifier stage and the second		
10	voltage supply is connected to the voltage supply connection of the first		
11	amplifier stage.		
1	39. A method of receiving an audio signal from a personal computer, the		
2	method comprising:		
3	(a) connecting an ancillary audio apparatus into a user-accessible first audio		
4	connection;		
5	(b) as a result of step (a), causing a jack-sense indicator to provide a signal that		
6	indicates that an ancillary audio apparatus is connected in the user-		
7	accessible first audio connection;		
8	(c) as a result of step (b), causing an audio amplifier to be disconnected from a		
9	second audio connection; and		
10	(d) as a result of step (b) causing a first voltage supply to be disconnected from the		

audio amplifier and a second voltage supply to be connected to the audio

amplifier.